

# REVIEW OF RECENT LITERATURE

Ayuga, C.E., E. Carretero & P. Bermejo. Contribution to the study of flavonoids in *Drosera rotundifolia*. An. R. Acad. Farm. 51 (2): 321-326. 1985.

The authors continue to identify new compounds of the flavonoid type which could be used for identification.

Damtoft, S., S.R. Jensen & B.J. Nielsen. Iridoid glucosides from *Utricularia australis* and *Pinguicula vulgaris* (Lentibulariaceae). Phytochemistry (Oxf) 24(10): 2281-2284. 1985.

The authors found similar iridoid compounds in both of the above species in this family.

Farkas, M.J. and R.A. Brust. Phenology of the mosquito *Wyeomyia smithii* in Manitoba and Ontario Canada. Can. J. Zool. 64(2): 285-290. 1986.

The water-filled pitchers of *S. purpurea* were studied in bogs near The Pas and Patricia Beach, Manitoba, and Kenora, Ontario. Larvae enter a third-instar diapause by mid-August and remain over the winter until the following spring.

Survival over the winter was about 9% to 68% in one winter and about 50% in another season. Winter snow insulates the larvae at these sites. A small percentage of the summer generation at each site continued their development to adults and give rise to another generation.

Joel, D.M. and H.S. Heide-Jorgensen. Ultrastructure and development of the pitcher epithelium of *Sarracenia*. Isr. J. Bot. 34(2-4): 331-350. 1985.

The bottom zone cells of this pitcher plant have dense cytoplasm, a large nucleus and many mitochondria and chloroplasts. The hypodermal cells have simple pits traversed by many plasmodesmata that connect each hypodermal cell with the neighboring rectangular epidermal cell, hypodermal and mesophyll cells.

Nicholls, K.W., B.A. Bohm & R. Ornduff. flavanoids and affinities of the Cephalotaceae. Biochem. Syst. Ecol. 13(3): 261-264. 1985.

The flavonol-based chemical profile found in *Cephalotus* resembles the profile

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## FIELD TRIP TO GASQUET (Cont'd. from page 16.)

glass. And so was I, when suddenly to my shock I saw a cluster of about ten giant-sized sundews! "*Drosera capensis!*" I cried. In Gasquet? "No! It must be *anglica!* Can't be! Is it some transplanted hybrid? *Anglica x filiformis? x linearis?* Some new, unknown species?" I was baffled. The attractive plants, growing on short stalks, had extremely narrow petioles, as long as the thin leafblade, covered with bright red tentacles. The entire plant was over 7 inches across. We scoured the area, but we could find no others. I examined the peat it grew in for signs of a transplant. It was an unfamiliar tan muck, but the plants could have come up from root-cuttings or seed. I wondered why, if put there by some CPer, no other species were tried. Perhaps they were, but were better hidden. I collected two plants, then took leaf cuttings and pressed them into the peat where they grew so more would multiply. And I wondered what they were the whole trip home.

Back in Sonoma County, I called Joe Mazrimas and described the plant to him. "Sounds like *Drosera capensis* narrow-leaf," he told me. So my first guess was right. "They survive the winters up there?" I asked. "They'll survive just about anything!" Joe laughed. I had never seen the true narrow-leaf variety of *capensis*, even though I grew for a local nursery, plants cloned from an original (what I thought to be *capensis* N.L.) purchased a few years ago that were sold under the narrow-leaf name. I'm surprised at the variation and the hardiness. Even though I never did find any *D. anglica* on this trip, it certainly was exciting.

Joe also told me that the red-leaved butterworts lose their color when moved from their native habitat. From the couple of plants now in my collection, he was right about that as well.

So to whoever planted cape sundews in Gasquet (and he or she may well be reading this), the plants are doing just fine, and my apologies for taking a couple of them. By this time next year, I'm sure there will be a few dozen more.

of the Saxifragaceae more than it does the Crassulaceae. Morphological features also suggests it is most closely allied to that family.

Ruiz, S.Z. and J. Rzedowski. Three new *Pinguicula* species (Lentibulariaceae) of Mexico. *Phytologia* 60(4): 255-263. 1986.

The three new species of *Pinguicula* are:

*P. barbata* from Chiapas

*P. emarginata* from Veraeruz and Puebla

*P. takakii* from San Luis Potosi

Sheridan, Phil. 1986. The Sarraceniaceae of Virginia. *Virginia J. Science*. 37: 83. (Abstract of paper presented at Virginia Academy of Science, May, 1986).

The current and historical ranges for *Sarracenia flava* and *S. purpurea* were analyzed over a two-year period based on field work, personal interviews, bibliographic searches and herbarium specimens. *S. flava* was found to have occurred in eight counties for a total of seventeen locations. Three sites were relocated in three counties, and two new ones found. *S. purpurea* ranged over 14 counties with 19 populations. Three historical locations

were refound in three counties with four new colonies in one county. Color variants were noted, and the ideal habitat was a springhead. Recommended status for both species in the State is threatened. DES

Teryokhin, E.S. 1986. The development and structure of the *Aldrovanda vesiculosa* (Droseraceae) seed. *Bot. Journ.* 71: 527-533. / Russian, Leningrad./

Embryogenesis of *Aldrovanda*, *Dionaea* and *Drosera* is similar. The seed of *Aldrovanda* is possessed of a thick seed coat of 3 layers. The storage tissue (endosperm) fills about 2/3 of the seed volume. Cotyledons, apex and hypocotyl are morphologically indicated, but no anatomical signs of primary root are present in the embryo. ST.

Zavortink, T.J. *Zinzala*, new subgenus of *Wyeomyia* with two new species from pitcher plants in Venezuela. *Wasmann J. Biol.* 43(1/2): 46-59. 1985.

The immature stages of the mosquitoes *W. zinzala* and *W. fishi* inhabit the leaves of the *Heliamphora* pitchers found in the Gran Sabana region of Venezuela.

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## DROSERA ANGLICA FROM THE ALAKAI SWAMP, KAUAI, HAWAII

by J.A. Mazrimas

On the oldest island of the Hawaiian chain, stands an old 5,148 foot extinct volcano, Mt. Waialeale. At the base of this volcano is a 30 square-mile bog which is constantly being rained on throughout the year. This area receives more than 460 inches of annual rainfall and is noted as one of the wettest places on earth. In this bog one can find many unusual flora and fauna which are either very rare or became extinct due to man's predation. However, we are fortunate to still have in the Alakai bog the small, herbaceous plant called *Drosera anglica*.

Several years ago I acquired a few plants from a friend who visited this area. The plants were carefully adjusted into some Canadian sphagnum peat moss and kept evenly moist in my tropical greenhouse. They grew vigorously and seemed to flower throughout the spring and summer season. The flowers produced seed on their own and the seed germinated into tiny plantlets after several weeks. I found by experimentation that the plants do not form hibernacula to carry them over the cold, winter frost and snows as do the North American types. The plant growth slows down and even seems to stop during the winter despite the warm temperatures and artificial lights extending the daylight hours. I'm almost tempted to think that this plant is an annual, producing copious seed to assure its continuance in the bog. Plants in cultivation seem to die off during the winter. (Cont'd. next page)